

## CLAIMS

1. A composing method for composing a data compartment aggregation packet frame comprising:
  - 5 generating a plurality of data compartments, each having a compartment identifier, an MSDU and a compartment FCS;
  - combining the data compartments to define a data carriage;
  - generating a carriage header to be located in front of the data carriage to define a carriage;
- 10 generating a MAC header to be located in front of the carriage, said MAC header including a portion allocated with a unique bit pattern; and
  - generating a frame FCS for error detection in the MAC header and the carriage.
- 15 2. A composing method of claim 1, wherein said carriage header includes a compartment count indicating the number of data compartments, a compartment length information indicating the length of each of the data compartment and a header FCS.
3. A composing method of claim 1, wherein said compartment identifier includes only a compartment sequence control number.
- 20 4. A composing method of claim 1, wherein said compartment identifier includes only a flow identifier and a compartment sequence control number.
5. A composing method of claim 1, wherein said compartment identifier includes only a compartment recipient address, and a compartment sequence control number.
- 25 6. A composing method of claim 1, wherein said compartment

identifier includes only a compartment recipient address, a flow identifier and compartment sequence control number.

7. A composing method of claim 1, wherein said compartment identifier includes a MAC header.

5 8. A composing apparatus for composing a data compartment aggregation packet frame comprising:

means for generating one or more data compartments, each having a compartment identifier, an MSDU and a compartment FCS;

10 means for combining the data compartments to define a data carriage;

means for generating a carriage header to be located in front of the data carriage to define a carriage;

15 means for generating a MAC header to be located in front of the carriage, said MAC header including a portion allocated with a unique bit pattern; and

means for generating a frame FCS for error detection in the MAC header and the carriage.

9. A composing apparatus of claim 8, wherein said carriage header includes a compartment count indicating the number of data compartments, a compartment length information indicating the length of each of the data compartment and a header FCS.

10. A composing apparatus of claim 8, wherein said compartment identifier includes only a compartment sequence control number.

25 11. A composing apparatus of claim 8, wherein said compartment identifier includes only a flow identifier and a

compartment sequence control number.

12. A composing apparatus of claim 8, wherein said compartment identifier includes only a compartment recipient address, and a compartment sequence control number.

5 13. A composing apparatus of claim 8, wherein said compartment identifier includes only a compartment recipient address, a flow identifier and compartment sequence control number.

14. A composing apparatus of claim 8, wherein said 10 compartment identifier includes a MAC header.

15. A decomposing method for decomposing a data compartment aggregation packet frame having a MAC header, carriage header and a plurality of data compartments, said decomposing method comprising:

15 detecting a unique bit pattern located in a MAC header;  
separating data compartments; and  
processing the data compartments.

16. A decomposing apparatus for decomposing a data compartment aggregation packet frame having a MAC header, 20 carriage header and a plurality of data compartments, said decomposing apparatus comprising:

means for detecting a unique bit pattern located in a MAC header;

means for separating data compartments; and

25 means for processing the data compartments.

17. A computer readable data compartment aggregation packet frame comprising:

a plurality of data compartments, each having a compartment identifier, an MSDU and a compartment FCS, said data compartments being aligned to define a data carriage;

5 a carriage header located in front of the data carriage to define a carriage;

a MAC header located in front of the carriage, said MAC header including a portion allocated with a unique bit pattern; and

a frame FCS for error detection in the MAC header and the carriage.

10 18. A computer readable data compartment aggregation packet frame of claim 17, wherein said carriage header includes a compartment count indicating the number of data compartments, a compartment length information indicating the length of each of the data compartment and a header FCS.

15 19. A computer readable data compartment aggregation packet frame of claim 17, wherein said compartment identifier includes only a compartment sequence control number.

20. 20. A computer readable data compartment aggregation packet frame of claim 17, wherein said compartment identifier includes only a flow identifier and a compartment sequence control number.

21. 21. A computer readable data compartment aggregation packet frame of claim 17, wherein said compartment identifier includes only a compartment recipient address, and a compartment sequence control number.

22. 22. A computer readable data compartment aggregation packet frame of claim 17, wherein said compartment identifier includes

only a compartment recipient address, a flow identifier and compartment sequence control number.

23. A computer readable data compartment aggregation packet frame of claim 17, wherein said compartment identifier includes a

5 MAC header.